

## Instrumental backgrounds in the LUX-ZEPLIN (LZ) dark matter detector

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LZ is a next generation dark matter search experiment designed to significantly extend our sensitivity to WIMP dark matter candidates. At the core of the LZ detector is a dual-phase xenon time projection chamber (TPC) with a 7 ton active mass. Among the many flavors of backgrounds in these TPCs, instrumental backgrounds are particularly challenging because they are very difficult to predict. Furthermore, instrumental backgrounds are becoming increasingly important because they scale with TPC size while other backgrounds are being reduced through careful material selection and handling. In this talk, I will give an overview of the instrumental effects expected in LZ and the array of techniques used to mitigate them.

**Presenter:** STIFTER, Kelly (Stanford University)